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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

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| Preparation for International |) | |
| Telecommunication Union World |) | IC Docket No. 94-31 |
| Radiocommunication Conferences |) | |

REPLY OF COMSAT MOBILE COMMUNICATIONS

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

COMSAT Mobile Communications

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SUMMARY

COMSAT Mobile Communications ("CMC") has reviewed the Comments filed in this proceeding concerning the preparations for the 1993 World Radiocommunications Conference ("WRC-93"). In our Reply, we note that many of the other parties in this proceeding agree with our position that Mobile Satellite Service ("MSS") issues should be given top priority at WRC-95. We also note that a majority of the MSS industry agrees with us that the prime objective for the United States at WRC-95 should be to assure that the global MSS bands at 2 GHz allocated at WARC-92 are available for use before the year 2000.

CMC opposes the suggestions of two of the Commenters which seek to delay the dates of entry into force of the WARC-92 global MSS bands. Contrary to the suggestion of MSTV, there is no reason for domestic issues concerning the implementation of MSS in the United States to delay global availability of the 2 GHz MSS bands. Nor is there any merit to Motorola's argument that the implementation of MSS systems at 2 GHz must await the development of standards for FPLMTS.

Our Reply also responds to specific issues raised in the Comments regarding the availability of spectrum for MSS feeder links, the proposed changes to existing MSS allocations in the 1.5/1.6 GHz bands and various proposals for new MSS allocations. We hope that this Reply will help to facilitate resolution of MSS issues within the WRC-95 Industry Advisory Committee.

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To the Commission:

REPLY OF COMSAT MOBILE COMMUNICATIONS

COMSAT Mobile Communications ("CMC"), a business unit of COMSAT Corporation, hereby submits its Reply to the comments filed on July 15, 1994, in IC Docket No. 94-31 in response to the Commission's Notice of Inquiry ("NOI")¹ regarding preparations for the 1995 International Telecommunication Union ("ITU") World Radiocommunication Conference ("WRC-95").

CMC's Comments on the NOI focused on the need to resolve Mobile Satellite Service ("MSS") issues as the top priority agenda item at WRC-95. CMC stated that the prime objective for the United States at WRC-95 should be to assure that the global bands at 2 GHz allocated to MSS at the 1992 World Administrative Radio Conference ("WARC-92") are available for use before the year 2000. In addition, CMC indicated that there is a strong need to secure new MSS allocations at WRC-95, or, if necessary, WRC-97, and to obtain allocations for MSS feeder links.

Several other parties have filed comments on the NOI which address the MSS issues of concern to CMC and concur with our recommendations to facilitate resolution of MSS service and feeder

¹Notice of Inquiry, IC Docket No. 94-31, adopted April 20, 1994, ("WRC-95 NOI").

link issues. We are particularly concerned, however, with the views expressed in two of the Comments which oppose the advancement of the dates of entry into force of the WARC-92 global MSS bands. Our Reply addresses these concerns and also responds to specific issues raised in the comments regarding the availability of spectrum for MSS feeder links, changes to existing MSS allocations in the 1.5/1.6 GHz bands and specific proposals for new MSS allocations.² These issues need to be given fuller consideration in the Industry Advisory Committee ("IAC") created by the Commission to help formulate an appropriate U.S. position going into WRC-95.

I. THE 2 GHZ BANDS ALLOCATED TO GLOBAL MSS AT WARC-92 MUST BE AVAILABLE FOR USE BEFORE THE YEAR 2000 TO FACILITATE NEW MSS PERSONAL COMMUNICATIONS SERVICES

Numerous Commission proceedings have documented the pressing need for spectrum allocations that can be used immediately to unleash new technology for mobile satellite systems to advance the global infrastructure for new mobile personal communication services.³ At WARC-92, the U.S. delegation took the lead in efforts to find global allocations for MSS that could be made available at an early date.

²The COMSAT World Systems ("CWS") division of COMSAT is filing a separate Reply today which focuses on fixed satellite service ("FSS") issues, the Report of the Voluntary Group of Experts ("VGE"), preparations for future WRCs and the agenda for WRC-97.

³ See, e.g., Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) ("WARC-2 Final Acts"); Final Acts of the World Radiocommunication Conference (Geneva, 1993) ("WRC-93 Final Acts"); Memorandum, Opinion and Order, GEN Docket No. 90-314, adopted June 9, 1994 ("PCS Order").

Indeed, while the rest of the world settled for a footnote date of 2005 for the availability of the new 2 GHz global MSS allocations,⁴ the United States made it clear by entering a country footnote in the International Table of Frequency Allocations that these bands would be available for use in the United States in the year 1996.⁵

Since WARC-92, and in response to strong U.S. leadership to expedite the application of new MSS technologies,⁶ much of the world, notably the CEPT countries, have come around to the U.S. view that satellites will play a major role in providing future public mobile services and that this will happen at a date earlier than the year 2005 and closer to the U.S. footnote date of 1996. This growing consensus was reflected in the agreement at WRC-93 to include on the agenda for WRC-95 an item to address ways to facilitate the use of the MSS bands allocated at WARC-92 and also was reflected in the Recommendation that Administrations cooperate in the coordination of consultations for satellite systems proposing to implement the global MSS 2 GHz bands allocated at WARC-92.⁷

Given the clear position of the United States on the urgent need

⁴See WARC-92 Final Acts, RR Footnote 746B.

⁵See WARC-92 Final Acts, RR Footnote 746C.

⁶The Commission is proceeding to license the proposed low earth orbit ("LEO") satellite systems in the Radio Determination Satellite Service ("RDSS")/MSS bands. See Notice of Proposed Rulemaking, CC Docket No. 92-166, released February 18, 1994. Also, in April 1994, the Inmarsat Council took action to implement new satellite technology in the 2 GHz bands.

⁷See WRC-93 Final Acts, Recommendation No. PL/2.

for MSS spectrum and the recent actions of many other countries in support of early dates of entry, it would be incredible for the United States to change its positions now and ask the rest of the world at WRC-95 to "delay" instead of facilitate the implementation of the WARC-92 MSS bands. Yet this is exactly what two of the parties filing comments on the NOI have suggested. In Joint Comments with other television broadcasting entities, the Association for Maximum Service Television, Inc. ("MSTV"), proposes that the United States not support acceleration until it resolves domestic issues inherent in the implementation of MSS in the United States. MSTV Joint Comments at 9. In addition, Motorola recommends that the United States refrain from supporting acceleration because such action might be inconsistent with the use of these bands for satellite systems compatible with FPLMTS. Motorola Comments at 6-7. These suggestions reflect a narrow minority view and are not supported by the record in this proceeding nor in any in other domestic or international proceeding.

A. Domestic Issues Concerning the Implementation of MSS in the United States Should Not Delay the Global Availability of the 2 GHz MSS Bands

MSTV and the Joint Commenters urge the Commission not to accelerate the dates for implementation of the WARC-92 MSS bands at 1970-2010 MHz from 2005 to 1996 until the United States has resolved "the issues inherent in implementation of such allocations domestically." MSTV Comments at 9. As shown above, MSTV's argument flies in the face of U.S. efforts over the past several years to advance the dates of entry into force of the 2 GHz MSS bands. This point is underscored in the NOI for WRC-95, in which the Commission

states that a major goal of the United States at previous Conferences has been to "facilitate the introduction of worldwide MSS." NOI at para. 19. Should the United States at WRC-95 seek to delay the dates for implementation of global MSS as MSTV suggests, the U.S. position in support of MSS would be seriously undermined and the four years of work on the part of the U.S. Government and the MSS industry to find suitable spectrum for global MSS would be wasted.

In any event, as the NOI confirms, the United States took action at WARC-92 to indicate in the International Table of Frequency Allocations that the date for implementation in the United States of the MSS bands at 1970-2010 MHz and 2160-2200 MHz would be 1996.⁸ Accordingly, the issue before WRC-95 concerns only the question of advancing the date from the year 2005 to an earlier date in the rest of the world. Thus, were the United States to go to WRC-95 with a contrary position, it would have to ask the Conference to move back the dates of entry for these bands in the United States. In other words, the United States would need to rescind its WARC-92 position. As indicated above, there is no basis for the United States to take such a position.

CMC disagrees with MSTV's suggestion that it is necessary to delay the availability of global MSS allocations until U.S. domestic issues concerning the availability of a segment of these bands in the United States have been resolved. While we agree that domestic

⁸See WRC-95 NOI at para. 21 (citing to Footnote 746C in which the United States "stated its requirement" at WARC-92 to permit MSS to be brought into these bands beginning in 1996).

allocation issues need to be addressed promptly by the Commission, there is nothing that WRC-95 can do to impact the availability of these bands within the United States. Given that the bands were allocated globally in all three ITU Regions of the world at WARC-92, the issue facing WRC-95 is when will individual countries make these bands available in their respective countries. At WARC-92, the United States stated in Footnote 746C that the bands would be available domestically in 1996, while the rest of the world said in Footnote 746B that the availability date would be 2005.

Accordingly, we urge the Commission to carry out its commitment in the PCS Order and promptly initiate a proceeding to allocate the WARC-92 MSS bands within the United States.⁹ Such a proceeding should address all of the issues of concern to MSTV, including spectrum sharing between MSS and broadcast auxiliary systems, relocation concerns and alternative MSS uplink allocations in other suitable bands, but should be totally separate from the U.S. actions at WRC-95.

B. FPLMTS Compatibility Issues Should Not Delay Implementation of Global MSS Allocations

Motorola, in its comments, raises the novel argument that the United States should not support a proposal to advance the 2005 date, because advancing the date would be inconsistent with the use of these bands for satellite systems compatible with Future Public Land Mobile

⁹See PCS Order at para. 97. CMC notes that the pending Petition for Rule Making filed by TRW, Inc. which seeks to allocate the WARC-92 global MSS bands to MSS may serve as a timely vehicle for initiating the requested proceeding. See TRW Inc. Petition for Rule Making, filed December 8, 1993.

Telecommunications Systems ("FPLMTS"). Motorola Comments at 6-7. According to Motorola, the FPLMTS standard will not be available until at least 1998; and since it takes years to design and construct a satellite system, an operational system based on the FPLMTS standard could not be available until 2005. Therefore, according to Motorola, a system constructed before this time either would not be FPLMTS compatible or would establish a de facto standard for FPLMTS, in derogation of the international process which has been undertaken to define FPLMTS.

In our view, Motorola's new-found concern for the compatibility between the FPLMTS standard and the availability of MSS spectrum is misplaced. One of the key reasons for moving the date for the MSS bands forward is to bring the timing of their implementation in line with the implementation of terrestrial PCS and FPLMTS. No one is suggesting that the terrestrial allocations for PCS should not be available at an early date because the standard for PCS systems FPLMTS have not yet been finalized.¹⁰ Under Motorola's approach this would be the case as it also takes time to design, test, manufacture, install and market terrestrial facilities consistent with PCS and/or the new FPLMTS standard. However, the standardization activities are on-going

¹⁰It is CMC's firm recollection that, at WARC-92, during the discussion of Footnote 746A concerning the availability of certain 2 GHz bands for FPLMTS, the U.S. spokesperson made it clear that these bands were in no way dedicated to FPLMTS operation and that other terrestrial and satellite operations, whether or not they are FPLMTS compatible, would be free to operate in these bands. Motorola's suggestion that the world should wait for the FPLMTS standard, thus, is at odds with the U.S. position on FPLMTS.

and should not be used to delay the spectrum allocation process, which needs to be completed well in advance of the implementation stage for a number of reasons.

To begin with, if the date for availability of the global MSS bands is not moved forward to 2000 or sooner, then it will be difficult, if not impossible, to take the needed actions in time to relocate existing fixed service terrestrial users from the satellite bands to other bands or technologies. In fact, such actions are already underway in anticipation of moving the date. If the date is not moved forward, these actions will likely stop. For example, in the United States, the Commission recently completed a long and difficult proceeding to free-up spectrum for PCS and other emerging technologies including MSS/PCS.¹¹ Also, it appears that many administrations, especially the Europeans, are taking similar steps to relocate terrestrial operations in order to open-up at least parts of the 2 GHz bands at an early date for satellite use.¹²

Three other satellite companies, in addition to CMC, were explicit in their comments that the 2005 date should be advanced to make MSS globally available in the 2 GHz bands at an earlier date. The Comments of Constellation (page 8), Ellipsat (page 11) and Hughes (page 5-6) all support an early date as being in the competitive interests of the United States and in recognition of the global nature

¹¹See First Report and Order and Third Notice of Proposed Rulemaking, ET Docket No. 92-9, 7 FCC Rcd 6886 (1992).

¹²See, e.g., ITU-R Document No. TG 8-3/TEMP/20 (REV 1); ITU-R Document No. TG 8-3/TEMP/31 (REV 1).

of MSS services.

Motorola's position also is surprising considering that it previously has championed the need to secure allocations before the standardization process is complete.¹³ At WARC-92, the U.S. delegation endeavored to secure the allocation and early availability of spectrum for the "Big LEOs" in the RDSS bands without first deciding standardization issues. This effort was fully supported by Motorola. Without the allocation attained at WARC-92, we doubt that there would be a domestic standardization/licensing proceeding for Big LEO systems underway now in the United States. For the same reason, we doubt that there will be any effort to make the 2 GHz MSS bands useable, unless the date of availability of these bands is moved forward and decisions are taken now to develop and implement these bands.

CMC is of course prepared to continue to discuss the matters raised by Motorola in the IAC forum. We strongly believe that it is in the U.S. interest and in the interest of all countries to cooperate to bring new global MSS services to the marketplace as quickly as possible, and the early availability of the 2 GHz bands allocated at WARC-92 is critical to this objective. In our view, the U.S. would be sending a new and confusing message to the rest of the world if we now took the position that the year 2005 is satisfactory to the U.S. and is a good target date for the rest of the world. This would be contrary to the message the United States delivered at WARC-92 and

¹³We note, however, that the Motorola Iridium first generation system will make use of the Big LEO bands, but any follow-on Iridium system that might make use of the 2 GHz bands would not likely be available until the year 2005.

would erase any hope of attaining new MSS allocations at WRC-95. Indeed, under these circumstances, we doubt that WRC-95 could have any rational discussion on new MSS allocations in order to set the stage for adoption at WRC-97.

II. THE UNITED STATES SHOULD CONSIDER MULTIPLE FREQUENCIES FOR MSS FEEDER LINKS

From our review of the Comments, it is clear that the United States should consider a variety of frequency bands for MSS feeder links to accommodate different non-GSO system designs and to preserve the option for future growth in feeder link spectrum requirements. CMC concurs with the comments of Loral Qualcomm Partnership ("LQP") (at 10-11), Ellipsat (at 5) and Constellation (at 9) that it would be inadvisable to place all non-GSO MSS feeder links in the 20/30 GHz band due to the pressures on the available spectrum to accommodate not only non-GSO MSS systems but also other recently proposed LMDS and FSS systems including Teledesic and Spaceway. CMC further agrees with LQP (at 11), Ellipsat (at 5,7) and Constellation (at 9) that limiting non-GSO MSS feeder links to the 20/30 GHz band not only would severely impact the non-GSO MSS system designs that are currently being developed for bands below 16 GHz, but also would likely raise the cost of PCS/MSS service to the public.

CMC continues to believe that the Commission should give particular consideration to the use of lower frequencies for MSS feeder links (e.g., C-band or Ku-band) based on the significantly reduced implementation costs for both ground and space segments at lower frequencies. We note, also, that a number of Commenters,

including LQP (at 4), Ellipsat (at 4), and Constellation (at 9), agree with our analysis that it is in the U.S. interest to promote bands below 16 GHz for MSS feeder links at the next ITU Task Group 4/5 meeting and in the United States proposals to WRC-95.

Several Commenters, including LQP (at 5), Ellipsat (in Exhibit A), Constellation (at 8) and Iridium (at 14), have made specific proposals or acknowledged preferences for non-GSO MSS feeder links in the C- and Ku-bands in the reverse direction. CMC believes that these proposals merit further consideration by the Informal Working Group-4 ("IWG-4") of IAC which is currently identifying lightly used FSS bands that could support non-GSO feeder links.

CMC notes LQP's proposal "to revise Footnote 797A to make the entire 5000-5250 MHz band available to MSS feeder uplinks, subject to the protection of aeronautical radionavigation installations."¹⁴ The 5000-5250 MHz band has been identified as a preferred feeder link band by three U.S. MSS proponents, namely, LQP (at 7), Ellipsat (at 6) and Constellation (at 8), and also has been identified by Inmarsat as one of several preferred bands for feeder links for the new Inmarsat-P service. We note, as well, that while the ICAO, at the recent ITU Task Group 8/3 meeting, has made reservations on some of the Task

¹⁴LQP Comments at 9. Because the International Civil Aviation Organization ("ICAO") plans to operate up to 200 microwave landing systems ("MLS") in the band 5030-5092 MHz, with a possible extension up to 5150 MHz, but does not plan to use MLS outside the 5030-5150 MHz band, CMC suggests a co-primary allocation for non-GSO feeder links in the sub-band 5150-5250 MHz. MSS feeder links also could be allocated at 5092-5150 MHz, but subject to the stipulation that they must protect aeronautical radionavigation systems.

Group's findings, it has agreed to undertake studies to validate the general consensus of Task Groups 8/3 and 4/5 that sharing between MSS and MLS services in the 5 GHz aeronautical radionavigation band may be feasible in either direction.¹⁵

III. PROPOSALS TO CHANGE EXISTING MSS ALLOCATIONS AT 1.5/1.6 GHZ SHOULD NOT PREEMPT CONSIDERATION OF 2 GHZ MSS ISSUES AT WRC-95

Several Commenters have suggested that the United States at WRC-95 should advocate the provision of "generic" MSS allocations -- those that do not discriminate between maritime, aeronautical or land-mobile MSS -- within portions of the 1.5/1.6 GHz or "L" band. See Comments of AMSC at 8-10; Comments of ARINC at 7-8; Comments of Motorola at 7-8. With so many other urgent MSS issues before the Conference, and so little time to reach consensus on these important items, CMC considers the "generic MSS" idea to be a secondary issue that should not take up undue time at WRC-95 -- especially given that the idea hasn't gotten very far at the past two WARCs.

In considering the merits of the issue, CMC finds itself in agreement with ARINC, which opposes any proposal by the United States to reallocate the AMS(R)S bands to generic MSS. We note that a fail-safe method to effect priority and real-time preemptive access, to protect aeronautical safety communications at 1545-1555/1646.4-1656.5 MHz, must be developed, demonstrated and validated prior to WRC-95, and concur with ARINC that this accomplishment is unlikely to happen before WRC-95 commences.

While efforts to accommodate generic MSS in the lower L-band have

¹⁵See ITU-R Document No. 8-3/TEMP/10.

progressed further than attempts to secure it in the upper L-band, some doubt remains in the maritime community that GMDSS can be fully protected from congestion problems created by the proliferation of land mobile MSS ("LMSS") terminals operating in these bands.¹⁶ In our view, it is highly unlikely that the international maritime community will endorse what it perceives to be further "in-roads" into the primary maritime MSS ("MMSS") bands. As such, we believe that the United States will be able to better conserve the resources of the Conference if it avoids taking on the generic MSS issue at WRC-95. allocations across the board in the lower or upper L-band.¹⁷

IV. THE U.S. SHOULD GIVE FULL CONSIDERATION TO THE IMPACT ON MSS OF THE PROPOSALS CONTAINED IN THE REPORT OF THE VGE

Many of the comments on the NOI addressed the possible regulatory impact on MSS of the "simplified" Radio Regulations proposed by the

¹⁶As the Commission is aware, under the terms of CMC's license to provide international land mobile services in the lower L-band, we must provide the Commission with a biannual report on Inmarsat's and COMSAT's progress in developing a means of distinguishing between maritime and land mobile-satellite transmissions, in order to allow for the continued primacy of maritime services. This requirement, prompted by U.S. Coast Guard concerns, reflects the continuing concerns of other SOLAS and GMDSS Signatories, for the primacy of maritime services.

¹⁷One issue which might merit consideration at WRC-95 is Motorola's suggestion that the 1525-1530 MHz/1626.5-1631.5 MHz band should be extended to all three ITU Regions as generic MSS. Motorola Comments at 7-8. The decision at WARC-92 to allocate MSS as primary only in Regions 2 and 3, was due to the prevalence of fixed terrestrial services in 1525-1530 MHz band in Europe (i.e. Region 1). Because CEPT membership has expanded since 1992 to include many eastern European administrations, it is possible that this minor adjustment to the WARC-92 MSS allocations might win support at WRC-95.

ITU's Voluntary Group of Experts ("VGE") in its Final Report. CMC agrees with the companies which expressed some concern regarding the VGE's treatment of Resolution 46 adopted at WARC-92, which impacts the advance publication, coordination and notification procedures of non-GSO satellite systems. See TRW Comments at 2-4; AMSC Comments at 18; Constellation Comments at 2; Motorola Comments at 2.

CMC believes that the wholesale adoption of the simplified language on generic coordination would not be in the U.S. interests. Accordingly, we reserve the right to participate fully with regulatory experts in the IAC to develop some modifications to the sections of the VGE Final Report on satellite coordination and related Rules of Procedure to be used by the ITU Radio Regulations Board. It also is clear from a number of the substantive issues raised by the Commenters that the revised Radio Regulations will materially affect U.S. MSS interests. In our view, the Commission should encourage private sector interests to join with Government regulatory experts in a careful review of the pertinent sections of the VGE Report which affect international coordination of MSS networks.¹⁸

V. NEW MSS ALLOCATIONS ARE NEEDED TO SATISFY DEMAND FOR MSS

In our Comments on the NOI, we demonstrated that even if all of the spectrum within the 1610-1626.5/2483.5-2500 MHz band and all of the global spectrum within the 1980-2010/2170-2200 MHz band were actually made available and useable to MSS, there would still be a

¹⁸See the Reply Comments of CWS filed today in the instant proceeding for a more detailed analysis of the Report of the VGE.

significant global MSS spectrum deficit, particularly for PCS/MSS type services, sometime after the year 2000. CMC Comments at 24-31. All of the MSS parties which filed Comments in this proceeding agree; in each case the MSS Commenters have stated unequivocally that there is simply not enough MSS spectrum available to meet projected demand. See TRW Comments at 9; LQP Comments at 18; Constellation Comments at 8; Motorola Comments at 9; AMSC Comments at 5.

Recent submissions to the ITU Radiocommunication Study Groups in Toronto, July 21-29, confirm the conclusions of the U.S. MSS industry. One document provides a case study of projected peak spectrum requirements for both "conventional" and handheld/PCS type MSS.¹⁹ The study projects a voice traffic peak spectrum requirement of 2 x 129 MHz, and a data traffic requirement of 2 x 26 MHz, using baseline subscriber forecasts projected up to the year 2010. With the introduction of satellite personal communications MSS systems, it is expected that up to two-thirds of the conventional LMSS traffic by 2010 will transfer to PCS/MSS. Taking this demand into account, the study projected that spectrum requirements for conventional MSS will range from a low of 2 x 61 MHz, to a high of 2 x 106 MHz.

This recent forecast of spectrum requirements for MSS, even if discounted by a factor of 2 or 3, demonstrates that the combined spectrum of the RDSS bands (2 x 16.5 MHz) and the 2 GHz bands (2 x 30 MHz), not all of which is usable to MSS, will fall short by a considerable margin of the amount of spectrum required for MSS by the year 2010. The United States must decide exactly how much new MSS

¹⁹See ITU-R Document No. 8-3/TEMP/24 (REV 1).

spectrum should be proposed at WRC-95 and in which portions of the 1-3 GHz bands the new MSS allocations should be located.

The comments of the MSS industry reveal little agreement among the industry on the specific proposals for new MSS allocations in the 2 GHz band. CMC believes that the current 1.5/1.6 GHz "L-band" MSS allocations, which are under heavy use by CMC/Inmarsat and other MSS operators, including AMSC's start-up operations on the Marisat satellite, should continue to accommodate conventional maritime, aeronautical and land-mobile (i.e. non-handheld) traffic. In addition, the 2.5/2.6 GHz band also can be used to accommodate growth of national/regional MSS operations (except those of the United States). However, we believe that the growth in satellite-based PCS services, which are inherently global in nature, should be accommodated in common, global MSS bands usable in all three ITU Regions.

Motorola suggests (at 8) that Regional MSS bands should be separate from global allocations presumably set aside for non-GSO, personal communications type MSS. CMC agrees that it would be ideal to have separate allocations for national or regional MSS, but this may not be realizable at WRC-95 or even at future conferences, depending on the total number of MSS allocations that the world is willing to consider in the crowded 1-3 GHz frequency bands.

CMC disagrees, however, with Motorola's proposal that global allocations should be reserved for non-GSO MSS systems. Motorola Comments at 8. Global MSS can be provided by a constellation of geostationary satellites just as well as by non-GSO constellations.

Moreover, the ITU Radio Regulations, Article 8, make no distinction between non-GSO and GSO MSS in the Table of Frequency Allocations, although the detailed coordination mechanisms spelled out in Article 11/13 and Resolution 46 may be applied somewhat differently to the two types of satellite networks.

CMC notes that there is a consensus of sorts emerging from the MSS allocations being proposed by MSS interests, even though the discrete frequency bands being suggested differ widely. Specifically, most of the MSS interests have proposed MSS allocations that are extensions of the WARC-92 MSS bands. For example, Motorola (at 10) and AMSC (at 11-12) suggest that the 2 GHz MSS bands allocated by WARC-92 should be extended and/or slightly translated to 1990-2025/2165-2200 MHz, in lieu of (1970)1980-2010/(2160)2170-2200 MHz, because of the Commission's recent PCS order which effectively denies MSS access in the United States in the 1970-1990 MHz (earth-to-space) band. Constellation (at 8) makes a similar proposal.

CMC welcomes a more detailed examination and consideration of these proposals in the IAC. In our view, proposals which are tied in with the precedent established at WARC-92 will be far more readily accepted at WRC-95, or possibly WRC-97, than MSS allocation proposals which have not been vetted in previous WARCs.

In the same vein, CMC notes that both AMSC and Motorola have proposed many new MSS band pairs on either side of the current L-band allocations in the 1525-1559/1626.5-1660.5 MHz band. See Motorola Comments at 12 (suggesting that the 1675-1710 MHz Metsat downlink band be extended from Region 2-only to global); AMSC Comments at 14

(contending that the 1492-1525 MHz Metsat uplink band can be shared with aeronautical telemetry). Motorola even goes one step further by suggesting that MSS could be allocated in the so-called GPS/GLONASS "gap" (1585.65-1594.0775 MHz) as a space-to-earth MSS band. CMC reserves the right to comment on these proposals in subsequent IAC discussions.

We would like to recommend, however, that the Commission consider another small extension of the L-band, similar to the 1525-1530 MHz additional MSS allocation made at WARC-92. We suggest a build-out of paired spectrum at the top end of the L-band at 1559-1564 MHz (space-to-earth) and 1660.5-1665.0 MHz (earth-to-space). This 5 MHz band pair could share the spectrum with radio astronomy under the criteria developed in the Negotiated Rulemaking Committee ("NRC") used in the "Big LEO" proceeding. Thus, geographical forbidden zones would be created around the radio astronomy observatory sites keyed to the latitude/longitude GPS coordinates loaded into the MSS handsets or broadcast by gateway stations. As with Motorola's GPS/GLONASS "gap" band, the top end of the MSS downlink would still be some 11 MHz away from the 1575-1585.65 MHz band used by GPS spread-spectrum transmissions, which is more than a sufficient frequency separation to prevent any interference to GPS receivers.

CONCLUSION

For the foregoing reasons, CMC requests that the Commission adopt the proposals and recommendations advanced in CMC's Comments on the WRC-95 NOI and those contained in the instant Reply.

Respectfully Submitted,

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August 5, 1994

CERTIFICATE OF SERVICE

I, Rose M. Javier, certify that copies of the foregoing "Reply of COMSAT Mobile Communications" were served by first-class mail, postage prepaid, this 5th day of August 1994 on the following:

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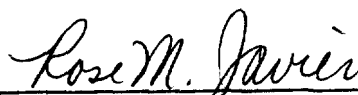
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